



ASHORE SAFETY **PROGRAMS**

OPERATIONAL RISK MANAGEMENT

MOTOR VEHICLE SAFETY DIVISION

NAVAL SAFETY CENTER



“ One of the most challenging aspects of naval operations is successfully managing risk--identifying and assessing hazards, then employing tools to make sure those hazards don't harm our shipmates and destroy equipment.”

-ADM Jay Johnson,
CNO



HIGH RISK?

WHEN WAS THE LAST TIME YOU HAD HIGH RISK TRAINING?

HOW MANY BELIEVE THAT DRIVING AN AUTOMOBILE IS A HIGH RISK ACTIVITY?

WHEN WAS THE LAST TIME YOU HAVE TAKEN A DEFENSIVE DRIVING COURSE?



HIGH RISK?

***AAA DRIVER IMPROVEMENT PROGRAM STATES
THAT DRIVING IS A HIGH RISK ACTIVITY!!!!***

IT TAKES FIVE YEARS TO BECOME AN AVERAGE DRIVER



RISKY BUSINESS?

DRIVING EMERGENCY VEHICLES?





EMERGENCY VEHICLE RESPONSE





CRASH?



TRUE
EMERGENCY

Officer dies in crash



Rescue personnel take Jacksonville police Officer Mike Boynton to a helicopter after a crash on West Fifth Street.

Patrol car hits tree during emergency call

By Paula C. Paul
and Shannon Wamble
Times-Union staff writers

Jacksonville police Officer Mike Boynton died last night while on his way to help someone else.

The 32-year-old officer was responding to an accident with injuries when he overtook his patrol car to miss a dog in the 4900 block of West Fifth Street about 7:30 p.m., authorities said. The driver's side of

the car slammed into a tree, leaving Boynton pinned in the wreckage for an hour.

Id. Bill Leeper of the Florida Highway Patrol said Boynton was taken by helicopter to University Medical Center, where he died of multiple injuries.

Leeper said investigators estimated Boynton's speed when he drove the two-lane road at 40 to 50 mph. The crash occurred just east of Leno Avenue.

Tommy Pittman, a truck driver, said he came upon the accident just after it happened. He and three other people turned the car back over. He said one of the early passers-by was a doctor, who tried to help Boynton.

"At that time we couldn't get a pulse," Pittman said. "He was losing a lot of blood."

Last night, Boynton's family, friends and fellow officers gathered at University

to support one another. Among those there was Boynton's fiancée, who also is a police officer. Leeper said an officer told him last night he had received an invitation yesterday to Boynton's mid-November wedding.

"You will see officers with tears in their eyes because when one falls, we're all hurt," Sheriff Nat Glover said last night.



The Dallas Morning News/William

DUE
REGARD





Why ORM Now?

- Little USN progress in reducing risk\mishaps in last 10 years.
- Force reductions make every EV operator and piece of equipment more critical to mission success.
- ORM process proven to be mission supportive.
- Moral responsibility to protect our people.



SIGNIFICANT LOSSES OVER THE PAST 5 YEARS



▮ **4 Billion dollars spent for mishaps on average every 5 years.**

3 hurt in ambulance collision

By HERB FRAZIER
The Post and Courier staff

Two Charleston County paramedics and a James Island woman escaped serious injury Monday when the woman's vehicle broadsided an ambulance, tossing it through the air and nearly onto a car at Cannon Street and Courtenay Drive, authorities said.

Paramedics Chris Edgar and Albert March, the ambulance's driver and crew chief, were rushing north on Courtenay Drive to an emergency in downtown Charleston when their ambulance, with its lights and siren on, was hit shortly after 10 a.m. by a 27-year-old James Island woman who was traveling east on Cannon Street when her Jeep Cherokee entered the intersection and rammed the ambulance just behind the driver's door, said Charleston County Sheriff's Office spokesman Mitch Lucas.

The impact sent the 10,000-pound ambulance hurtling through the air toward a stunned Kerry Boykins of North Charleston, who prayed it would not crash through his sunroof. Boykins, who was stopped at the Cannon-Courtenay intersection, said he rushed to the woman and helped her out of her smashed vehicle. Boykins said she told him: "I didn't hear him. I didn't hear him."

See WRECK, Page 6-B

March, Edgar and the woman were taken to Roper Hospital and treated and released, according to hospital spokeswoman Patsy French.

No charges have been filed and an investigation is continuing, Lucas said. March and the woman were not available for comment.

The woman's boyfriend, Brian Gilmore, said he rushed to the scene after he got a phone call. Gilmore said his girlfriend told him she was in the inside lane, and a large truck and other vehicles in the three lanes to her right blocked her view of the wide, four-lane intersection. She told him she did not see or hear the ambulance, he said.

Boykins was stopped at the intersection in the southbound lane on Courtenay. As the ambulance approached, Boykins said, he waved his arms and honked his horn to warn Cannon Street drivers the ambulance was about to enter the intersection.

The light was showing red for the southbound and northbound traffic on Courtenay as the ambulance entered the intersection, Boykins said. "We looked at each other and (the ambulance driver) knew I was not going anywhere," Boykins said. But from the right came the green Jeep that smashed into the



EMS workers tend to fellow paramedic Chris Edgar after the ambulance was hit Monday morning. Edgar's partner and the driver of the Jeep were all transported to Roper Hospital.

86 % of all mishaps are PERSONNEL related (Human error).

➔ **1045 deaths due to mishaps.**



Causes of Risk

- * Change - The "Mother" of Risk
- * Resource Constraints
- * New Technology
- * Complexity
- * Stress



Causes of Risk

(Cont.)

- * Human Nature
- * High Energy Levels
- * Societal Constraints
- * Environmental Influences
- * Speed/Tempo of Operation





Operational Risk Management

What is ORM?

A **process** to assist you in performing everyday tasks **safely** and efficiently! Modify the process to fit the situation while still identifying and assessing risks and developing controls to reduce the



ELEMENTS OF ORM

3 Levels of Application

4 Principles

5 Steps



3 LEVELS OF APPLICATION

1 = TIME CRITICAL

(90% of the ORM processes are “On The Run”)

2 = DELIBERATE

(Complete 5 step process)

3 = IN DEPTH

(Other considerations outside the local chain of command)



4 PRINCIPLES

- 1 ACCEPT RISKS WHEN BENEFITS OUTWEIGH THE COSTS**
- 2 ACCEPT NO UNNECESSARY RISK**
- 3 ANTICIPATE & MANAGE RISK BY PLANNING**
- 4 MAKE RISK DECISIONS AT THE RIGHT LEVEL**



5 STEPS

1. Identify hazards

2. Assess hazards

5. Supervise

3. Make risk decisions

4. Implement controls



IDENTIFY **HAZARDS**

➤ **Analyze manageable pieces of an event**

➤ **Use experience as a guide**

“Experience is the name everyone gives to their mistakes”

Oscar Wilde, 1892

➤ **Ask what if, use brainstorming, think cause and effect**



ASSESS HAZARDS

**Prioritize identified hazards
based on:**

**Severity
and
Probability
of possible loss**



HAZARD SEVERITY

CATEGORY I This hazard may cause death, or loss of total vehicles or result in grave damage to departmental mission accomplishment

CATEGORY II May cause sever injury, partial disability and/or major vehicle damage

CATEGORY III May cause minor injury and vehicle damage

CATEGORY IV Probably would not cause personal injury or property damage but never the less a violation of good EVO practice

PROBABILITY OF OCCURRENCE

SUB-CATEGORIES

SUB-CATEGORY A - Likely to occur immediately or within a short period of time. Expected to occur frequently to emergency vehicles or ev operators.

SUB-CATEGORY B - Probably will occur in time. Expected to occur several times to emergency vehicles or ev operators.

SUB-CATEGORY C - May occur in time. Can reasonably be expected to occur some time to emergency vehicles or ev operators.

SUB-CATEGORY D - Unlikely to occur.



RISK MATRIX

		Probability of Occurrence			
		Likely	Probably	May	Unlikely
		A	B	C	D
S E V E R I T Y	Cat I	1	1	2	3
	Cat II	1	2	3	4
	Cat III	2	3	4	5
	Cat IV	3	4	5	5
		Risk Levels			

Probability of Occurrence + Severity =

**Risk
Assessment
Code**

1 = Critical
 2 = Serious
 3 = Moderate
 4 = Minor
 5 = Negligible



MAKE RISK DECISIONS

↪ **Consider risk control options, most serious risks first**

↪ **Risk versus benefit**

↪ **Communicate as required**



IMPLEMENT **CONTROLS**

➡ **Engineering Controls**

➡ **Administrative Controls**

➡ **Personal Protective Equipment**



SUPERVISE

- **Monitor effectiveness of controls**
- **Watch for changes**



BENEFITS OF RISK MANAGEMENT

- **Reduction in serious injuries and fatalities**
- **Reduction in material and property damage**
- **Effective mission accomplishment**

Navy fire van hit while on route to blaze

BY GINDY CLAYTON
STAFF WRITER

NORFOLK — A Navy fire department van was struck by a car and overturned, injuring the driver while he was en route to a three-alarm apartment fire that left 11 people homeless Sunday.

The accident occurred at 9:42 a.m. as Petty Officer Michael Kelly, a firefighter at the Little Creek Naval Amphibious Base, was headed to the blaze at the Oakmont North Apartments in the 1300 block of Johnstons Road.

Police said Kelly had the van's lights and siren on and had stopped at the intersection to make sure the way was clear. As he proceeded, a van headed south on Military Highway crashed into the fire department van, knocking it over and pushing it into a third vehicle.

The driver of the van that hit Kelly was identified as Paul Harrison, 35, of the 8400 block of Meadowcreek Road. Kelly and Harrison were taken to Sentara Norfolk General Hospital where they were treated for minor injuries and released.

Harrison was charged with failure to yield to an emergency vehicle, said police spokesman Larry Hill.



SUMMARY

ORM is a process ... NOT a program

Decision making tool to:

- **Increase ability to make informed choices**
- **Reduce risks to acceptable level**

ORM must become an inherent way of doing business



"I charge each of you with making
ORM a core element of Navy life.
It will make a positive difference!"

-ADM Jay Johnson,
CNO



Traffic Safety **ORM POCs**

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On the web:

www.safetycenter.navy.mil

IDENTIFY THE HAZARDS

EMERGENCY RESPONSE

VEHICLE

- CONDITION
- TYPE
- SAFETY EQUIPMENT
- LOAD
- CONDITION
- OPTIONS
- SPEED
- OTHER

HUMAN

- VEHICLE FAMILIARITY
- PHYSICAL/EMOTIONAL READINESS
- PERSONAL PROTECTION
- DRIVER EXPERIENCE/RESRICTIONS
- SECONDARY DRIVER/PARTNER
- ROUTE**

ENVIRONMENT

- DISTANCE TRAVEL
- PRE-DETERMINED ROUTES**
- TIME OF DAY/NIGHT/
DAY OF WEEK
- HIGHWAY LAWS
- OTHER DRIVERS
- WILDLIFE
- REQUIRED RESPONSE TIMES

**** ROUTES ARE DETERMINED BY THE LEAST NUMBER OF HAZARDS DRIVERS ARE EXPOSED TO**

- **HAZARDS:** BASED ON TIME OF DAY, DAY OF THE WEEK AND WEATHER CONDITIONS

- **INTERSECTIONS**
- **TRAFFIC CONTROL DEVICES**
- **TRAFFIC CONGESTION**
- **INTERSTATES**
- **HOUSING AREAS**
- **PLAYGROUNDS**
- **PEDESTRIAN CROSSWALKS**
- **BICYCLISTS**
- **JOGGERS/PATHS**
- **SCHOOLS**
- **DAYCARE CENTERS**
- **ROAD CONFIGURATIONS**
- **ROAD CONSTRUCTION**
- **RAILROAD CROSSINGS**
- **SPORTING EVENTS/COMMAND ACTIVITIES**
- **ETC.**
- **OTHERS**

Crash sets police car, library on fire

Officer lost control when headed to assist in pursuit

By LUEFRAS ROBINSON
STAFF WRITER

A Suffolk police officer escaped an accident with minor injuries Monday night after his attempt to assist in a pursuit was cut short when he crashed into a library, causing the car and building to ignite in flames.

Officer C.S. Kinsey, who's been on the Suffolk police force for 1-1/2 years, was traveling north on Bennett's Pasture Road around a deep curve just before reaching the Route 17 intersection when he "lost control and struck the building," said Suffolk Police Spokesman Mike Simpkins.

According to police reports, Kinsey was traveling at 67 mph, while the posted speed limit is 45 mph. Recommended safe speed in the curve is 25 mph. Simpkins stressed that Kinsey "did not become involved in a pursuit and he never saw a pursuit. He was going to assist another officer."

Kinsey was able to escape from the car and notify dispatchers about the accident. He was transported to Sentara Norfolk General Hospital where he was treated for injuries, including a contusion, and released Tuesday.

The car, valued at \$10,000, is a total loss. Damages to the library, its contents, and an adjoining building, have been assessed at \$200,000, said Jim Jenkins, assistant public information

Please see CRASH, page 2



A Suffolk police officer slammed into the Bennett's Creek Library at Bridge Road/Route 17 after he lost control of his vehicle, causing both the car and building to ignite in flames.

scenario

State trooper burned in fiery crash dies

ASSOCIATED PRESS

CUMBERLAND — A state trooper who was badly burned when his cruiser crashed while chasing a suspicious vehicle has died.

Daniel Lee Williams, 38, died Sunday at the Medical College of Virginia Hospitals in Richmond, said state police spokeswoman Corinne Geller.

On Friday night, Williams was at a checkpoint in Cumberland County when an approaching vehicle turned off its headlights, turned around and left the scene. He pursued, and minutes later Cumberland County sheriff's deputies found Williams' car engulfed in flames about seven miles from the checkpoint.

Suffolk police officer charged with driving too fast on wet road

STAFF REPORT

SUFFOLK — The police officer who was involved in a three-vehicle collision on U.S. 17 Monday morning has been charged with driving too fast for conditions.

Officer John M. Lane, a two-year department veteran, was charged Tuesday, police said. He was on his way to assist in an investigation when his patrol car crashed into a pickup and a car.

Lane, the driver of the car and a passenger in the pickup were injured, said police spokesman Michael E. Simpkins. All three were treated at hospitals and released by Monday afternoon.

Lane, 27, remained out of work Tuesday with a fractured collarbone, Simpkins said.

No disciplinary action has been taken against him, Simpkins said.

The investigation showed that Lane was going about 65 mph, within departmental limits for safe driving while responding to an emergency. The police car slid on wet pavement and ran into the two vehicles stopped at a traffic light at Harbour View Boulevard.

The cruiser and the pickup were total losses.

An accident review board considers all accidents involving city vehicles.

3 hurt in ambulance collision

By **HERB FRAZIER**
Of The Post and Courier staff

Two Charleston County paramedics and a James Island woman escaped serious injury Monday when the woman's vehicle broadsided an ambulance, tossing it through the air and nearly onto a car at Cannon Street and Courtenay Drive, authorities said.

Paramedics Chris Edgar and Albert Marsch, the ambulance's driver and crew chief, were rushing north on Courtenay Drive to an emergency in downtown Charleston when their ambulance, with its lights and siren on, was hit shortly after 10 a.m.

A 27-year-old James Island woman was traveling east on Cannon Street when her Jeep Cherokee entered the intersection and rammed the ambulance just behind the driver's door, said Charleston County Sheriff's Office spokesman Mitch Lucas.

The impact sent the 10,000-pound ambulance hurtling through the air toward a stunned Kerry Boykins of North Charleston, who prayed it would not crash through his sunroof.

Boykins, who was stopped at the Cannon-Courtenay intersection, said he rushed to the woman and helped her out of her smashed vehicle. Boykins said she told him: "I didn't hear him. I didn't hear him."

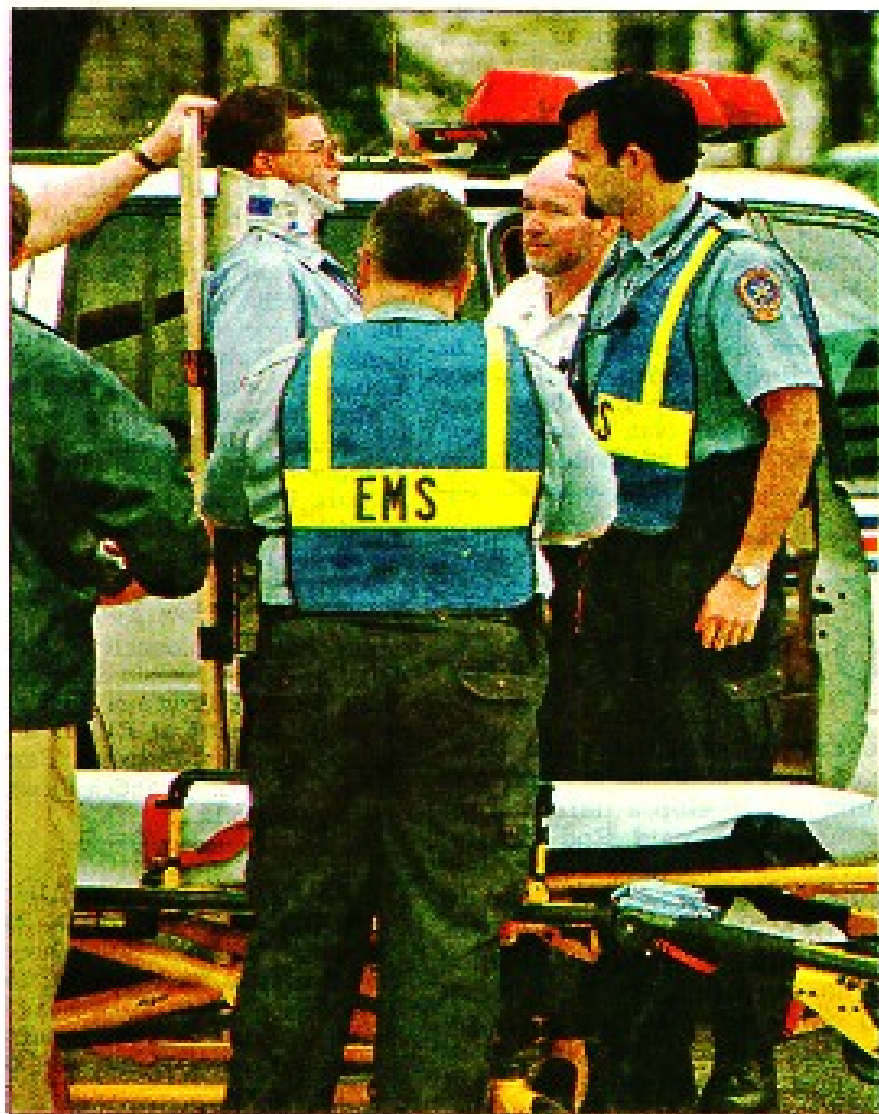
Marsch, Edgar and the woman were taken to Roper Hospital and treated and released, according to hospital spokeswoman Patsy French.

No charges have been filed and an investigation is continuing, Lucas said. Marsch and the woman were not available for comment.

The woman's boyfriend, Brian Gilmore, said he rushed to the scene after he got a phone call. Gilmore said his girlfriend told him she was in the inside lane, and a large truck and other vehicles in the three lanes to her right blocked her view of the wide, four-lane intersection. She told him she did not see or hear the ambulance, he said.

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EMS workers tend to fellow paramedic Chris Edgar after the ambulance was hit Monday morning. Edgar's partner and the driver of the Jeep were all transported to Roper Hospital.

See **WRECK**, Page 6-B



FIRE FIGHTER FACES JUDGE TODAY

Community torn in tragic tale
Firefighter faces judge today for crash
February 23, 2000
ASSOCIATED PRESS

Page #1

ROSCOMMON, MI -- A volunteer firefighter who was speeding to the scene of a crash struck and killed a 17-year-old homecoming queen finalist.

Five months later, the Gerrish Township firefighter is heading to court this week on a negligent homicide charge.

And residents of the rural northern Michigan community are trying to balance compassion for the young victim and sympathy for the well-liked defendant.

Erica Frydrych was driving on Roscommon's main street Sept. 17 when her pickup truck was struck broadside by a larger truck driven by Terry Gallagher, 55.

Gallagher, a self-employed electrician and 37-year volunteer firefighter, was on his way to a crash on I-75. Police say he was driving 57 m.p.h. to 63 m.p.h. in a 35 m.p.h. zone and was not using his siren.

FIRE FIGHTER FACES JUDGE TODAY

A Roscommon County district judge will decide today whether there is enough evidence for Gallagher to stand trial. He faces a possible two-year sentence and \$2,000 fine if convicted.

Page #2

"I wake up every morning and think about Erica and I say, 'Oh, yeah.' It's still very hard to believe it's happened," said Erica's mother, Donna Frydrych. "This was such an abrupt thing. No one expected it; it was homecoming. We've been a mess ever since."

The Frydrychs' emotional wounds were barely starting to heal when Gallagher was arraigned Jan. 26. The news of his arraignment "was like running into a brick wall," Erica's mother said.

"I know his wife quite well, and she's very nice. I can't even imagine what they're going through," Frydrych told the Bay City Times. "It's a tragedy Erica is gone, but there's no bringing her back so there's no sense being mean."

FIRE FIGHTER FACES JUDGE TODAY

"This has ruined many, many lives. There's just so much turmoil now -- questions, that ...keep it stirred up."

Gallagher, Gerrish Township Supervisor Ken Carlson and Roscommon County Prosecutor Dan Sutton declined comment on the case.

State law exempts speed limits for public safety officers traveling in authorized emergency vehicles if the driver sounds an audible signal -- a bell, whistle, siren, air horn or exhaust whistle.

But the exemption does not protect the driver of the vehicle "from consequences of a reckless disregard for the safety of others," Sutton wrote in Gallagher's arrest warrant.

Gallagher had a 1994 warning to stop speeding to emergencies and failing to use his vehicle's flashing red light.

Still, many had nothing but praise for him.

"I have a lot of respect for Terry and his wife," said the Rev. Anthony Citro, the priest at St. Michael Catholic Church in Roscommon, where the Gallaghers are parishioners.

FIRE FIGHTER FACES JUDGE TODAY

"He's a fine individual, and very devoted to his wife and four children. I like him a lot," Citro said.

The expressway crash to which Gallagher was responding involved former Bay City Mayor Anne Hachtel. She was driving north to attend a conference on Mackinac Island with her husband, Robert, and two others.

Hachtel said that for an unknown reason, her sedan edged off the paved shoulder, and she overcompensated, causing the car to overturn at least three times.

She and the three passengers were taken to Mercy Hospital in Grayling for treatment.

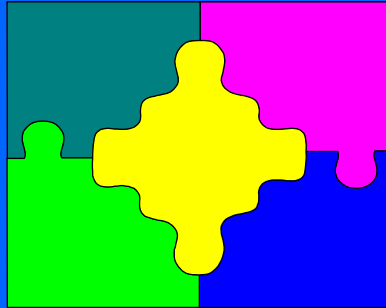
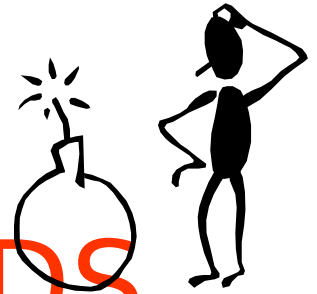
School officials canceled all homecoming events after Erica's death, rescheduling the festivities Oct. 20. They began the ceremony with a quiet tribute to Erica.

"She was very popular. Erica ...could find good in anybody," her mother said. "Our strength wore out fast after the major hubbub died down and reality set in.

"I just hope Erica is proud of how we're handling things."

PAGE 4

IDENTIFY THE HAZARDS ON YOUR RESPONSE ROUTES



USE THE MAP ON THE
FOLLOWING SLIDE

HAZARD ASSESSMENT

1.	II-B (2)	SERIOUS
2.	I-C (2)	SERIOUS
3.	III-C (4)	MINOR
4.	II-C (3)	MODERATE
5.	I-A (1)	CRITICAL

HAZARD ASSESSMENT

1. **II-B (2)**

2. **I-C (2)**

3. **III-C (4)**

4. **II-C (3)**

5. **I-A (1)**

SERIOUS

SERIOUS

MINOR

MODERATE

CRITICAL

END OF ORM

BREAK

